

FILE 'HOME' ENTERED AT 11:31:56 ON 04 MAR 2004

=> file medline, embase, biosis  
COST IN U.S. DOLLARS  
TOTAL

SINCE FILE

	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 11:32:22 ON 04 MAR 2004

FILE 'EMBASE' ENTERED AT 11:32:22 ON 04 MAR 2004  
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FILE 'BIOSIS' ENTERED AT 11:32:22 ON 04 MAR 2004  
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=> s fgf-9 or fibroblast growth factor 9  
L1 299 FGF-9 OR FIBROBLAST GROWTH FACTOR 9

=> s l1 and (multiple sclerosis or ms)  
L2 1 L1 AND (MULTIPLE SCLEROSIS OR MS)

=> d

L2 ANSWER 1 OF 1 MEDLINE on STN  
AN 2003302062 MEDLINE  
DN PubMed ID: 12828933  
TI Astrocytes produce CNTF during the remyelination phase of  
viral-induced  
spinal cord demyelination to stimulate FGF-2 production.  
AU Albrecht Phillip J; Murtie Joshua C; Ness Jennifer K;  
Redwine Jeffrey M;  
Enterline Jonathan R; Armstrong Regina C; Levison Steven W  
CS Department of Neuroscience & Anatomy, Pennsylvania State  
University  
College of Medicine, Hershey, PA 17033, USA.  
NC NS 33316 (NINDS)  
SO Neurobiology of disease, (2003 Jul) 13 (2) 89-101.  
Journal code: 9500169. ISSN: 0969-9961.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200308  
ED Entered STN: 20030628  
Last Updated on STN: 20030809  
Entered Medline: 20030808

=> d abs

L2 ANSWER 1 OF 1 MEDLINE on STN  
AB Multiple sclerosis is characterized by multiple  
lesions with selective loss of myelin and oligodendrocytes,  
leading to  
deficits of sensation and movement, as well as cognitive  
disabilities.  
Consequently, a major research endeavor is to identify  
strategies to  
enhance oligodendrocyte regeneration and remyelination.  
FGF-2 is a potent  
mitogen for OPCs, and it is induced in astrocytes in animal  
models of  
demyelinating diseases in conjunction with successful  
remyelination.  
However, the factors responsible for inducing FGF-2 after  
demyelination in  
astrocytes are unknown. Here we show that CNTF mRNA and  
protein increase

coincident with spinal cord remyelination in mice recovering  
from

MHV-induced demyelination. We identify CNTF within  
astrocytes surrounding  
and within remyelinating lesions, and show that CNTF  
increases FGF-2  
ligand and receptor mRNAs in spinal cord after direct  
application.

Furthermore, we show that CNTF increases FGF-2 mRNA  
approximately 2.5-fold  
in cultured mouse spinal cord astrocytes. Altogether, these  
results

strongly implicate CNTF as an important cytokine in  
demyelinating disease  
and as an upstream regulator of FGF-2 production in  
astrocytes during  
early remyelination.

=> s l1 and myelin  
L3 6 L1 AND MYELIN

=> duplicate remove l3  
DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L3  
L4 4 DUPLICATE REMOVE L3 (2 DUPLICATES  
REMOVED)

=> d 1-4

L4 ANSWER 1 OF 4 MEDLINE on STN  
AN 2003302062 MEDLINE  
DN PubMed ID: 12828933  
TI Astrocytes produce CNTF during the remyelination phase of  
viral-induced  
spinal cord demyelination to stimulate FGF-2 production.  
AU Albrecht Phillip J; Murtie Joshua C; Ness Jennifer K;  
Redwine Jeffrey M;  
Enterline Jonathan R; Armstrong Regina C; Levison Steven W  
CS Department of Neuroscience & Anatomy, Pennsylvania State  
University  
College of Medicine, Hershey, PA 17033, USA.  
NC NS 33316 (NINDS)  
SO Neurobiology of disease, (2003 Jul) 13 (2) 89-101.  
Journal code: 9500169. ISSN: 0969-9961.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200308  
ED Entered STN: 20030628  
Last Updated on STN: 20030809  
Entered Medline: 20030808

L4 ANSWER 2 OF 4 MEDLINE on STN  
DUPLICATE 1  
AN 2000414198 MEDLINE  
DN PubMed ID: 10900074  
TI Fibroblast growth factor-9  
modulates the expression of myelin related proteins and  
multiple  
fibroblast growth factor receptors in developing  
oligodendrocytes.  
AU Cohen R I; Chandross K J  
CS National Institutes of Health, National Institute of  
Neurological  
Disorders and Stroke, Bethesda, Maryland 20892-4160, USA..  
cohenr@ninds.nih.gov  
NC NS23705 (NINDS)

SO Journal of neuroscience research, (2000 Aug 1) 61 (3) 273-87.

Journal code: 7600111. ISSN: 0360-4012.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200008

ED Entered STN: 20000907

Last Updated on STN: 20020420

Entered Medline: 20000829

L4 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

AN 1999:74329 BIOSIS

DN PREV199900074329

TI Expression cloning of FGF-9 as a potent myelination factor for mature rat oligodendrocytes.

AU Treanor, J. J. S. [Reprint author]; Zhang, M. [Reprint author]; Wang, J.

[Reprint author]; Zhang, T. J. [Reprint author]; Armstrong, R.

C.; Louis,

J.-C. [Reprint author]; Magal, E. [Reprint author]

CS Dep. Neurosci., Amgen Inc., Thousand Oaks, CA 91320, USA

SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1798.

print.

Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part

2. Los Angeles, California, USA. November 7-12, 1998.

Society for

Neuroscience.

ISSN: 0190-5295.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)

LA English

ED Entered STN: 1 Mar 1999

Last Updated on STN: 1 Mar 1999

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

AN 1997:382383 BIOSIS

DN PREV199799681586

TI FGF-9 and FGF-2 regulate the expression of fibroblast growth factor receptors and myelin proteins during oligodendrocyte development.

AU Cohen, Rick I.; Chandross, Karen J.; Hudson, Lynn D.

CS NIH, NINDS, LDN, 9000 Rockville Pike Build. 36, Room 5D-05, Bethesda, MD

20892, USA

SO Journal of Neurochemistry, (1997) Vol. 69, No. SUPPL., pp. S89.

Meeting Info.: Joint Sixteenth Biennial Meeting of the International

Society for Neurochemistry and Twenty-eighth Annual Meeting of the

American Society for Neurochemistry. Boston, Massachusetts, USA. July

20-26, 1997.

CODEN: JONRA9. ISSN: 0022-3042.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 4 Sep 1997

Last Updated on STN: 27 Oct 1997

=> d his

(FILE 'HOME' ENTERED AT 11:31:56 ON 04 MAR 2004)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 11:32:22 ON 04 MAR 2004

L1 299 S FGF-9 OR FIBROBLAST GROWTH FACTOR 9

L2 1 S L1 AND (MULTIPLE SCLEROSIS OR MS)

L3 6 S L1 AND MYELIN

L4 4 DUPLICATE REMOVE L3 (2 DUPLICATES REMOVED)

=> s multiple sclerosis or ms

L5 275600 MULTIPLE SCLEROSIS OR MS

=> s l5 and myelin

L6 9549 L5 AND MYELIN

=> s l6 and treatment

L7 1488 L6 AND TREATMENT

=> s l7 and fgf-2

L8 4 L7 AND FGF-2

=> duplicate remove l8

DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS' KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L8

L9 2 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)

=> d 1-2

L9 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

AN 2004:112196 BIOSIS

DN PREV200400113058

TI Inducible expression of FGF2 by a rat oligodendrocyte precursor cell line

promotes CNS myelination in vitro.

AU Magy, Laurent; Mertens, Caroline; Avellana-Adalid, Virginia; Keita,

Mahamane; Lachapelle, Francois; Nait-Oumesmar, Brahim;

Fontaine, Bertrand;

Baron-Van Evercooren, Anne [Reprint Author]

CS Laboratoire des Affections de la Myeline et des Canaux Ioniques

Musculaires, Faculte de Medecine Pitie-Salpetriere, INSERM

U546, IFR 70,

CHU Pitie-Salpetriere, 105 Boulevard de l'Hopital, 75634,

Paris Cedex 13,

France

baron@ccr.jussieu.fr

SO Experimental Neurology, (December 2003) Vol. 184, No. 2, pp. 912-922.

print.

CODEN: EXNEAC. ISSN: 0014-4886.

DT Article

LA English

ED Entered STN: 25 Feb 2004

Last Updated on STN: 25 Feb 2004

L9 ANSWER 2 OF 2 MEDLINE on STN

DUPLICATE 1

AN 2003569220 MEDLINE

DN PubMed ID: 14648590

TI Role for TGF-beta1, FGF-2 and PDGF-AA in a myelination of CNS aggregate cultures enriched with macrophages.

AU Diemel Lara T; Jackson Samuel J; Cuzner M Louise

CS Department of Neuroinflammation, Institute of Neurology,  
University  
College London, London, United Kingdom..  
I.diemel@ion.ucl.ac.uk  
SO Journal of neuroscience research, (2003 Dec 15) 74 (6) 858-  
67.  
Journal code: 7600111. ISSN: 0360-4012.  
CY United States  
DT Journal; Article; (JOURNAL ARTICLE)  
LA English  
FS Priority Journals  
EM 200401  
ED Entered STN: 20031216  
Last Updated on STN: 20040131  
Entered Medline: 20040130

=> d 1-2 abs

L9 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2004 BIOLOGICAL  
ABSTRACTS INC. on STN

AB Transplantation of glial cells into the central nervous system  
(CNS) may

be a promising approach for the treatment of myelin  
disorders such as multiple sclerosis (MS).

Myelination by transplantation of oligodendrocyte precursors  
has been

obtained in different animal models of demyelination. A  
strategy to favor

CNS remyelination is to enrich the lesioned areas in growth  
factors to

stimulate the quiescent population of oligodendrocyte  
precursors. In this

context, we have developed a genetically modified CG4 cell  
line

(CG4-FGF2), which are able to release significant amounts of  
fibroblast

growth factor 2 (FGF2) in a controllable fashion in vitro. The  
data

presented here demonstrate that upon induction with Dox,  
CG4-FGF2 cells

retain their capacity to differentiate in vitro. Additionally, we  
provide

evidence that FGF2 release by engineered cells enhance  
proliferation and

migration of cells of the oligodendrocyte lineage without  
preventing them

to differentiate and myelinate axons in vitro.

L9 ANSWER 2 OF 2 MEDLINE on STN  
DUPLICATE 1

AB The increase in myelin basic protein (MBP) synthesis  
observed in

brain aggregate cultures supplemented with macrophages is  
reflected in

elevated supernatant protein levels of the key promoters of  
oligodendrocyte proliferation, fibroblast growth factor-2 (FGF-  
2) and platelet-derived growth factor-AA (PDGF-AA), during the

premyelinating phase. Although supernatant levels of  
transforming growth

factor-beta1 (TGF-beta1), the most abundant growth factor  
produced at the

transcriptional and translational levels by phagocytic  
macrophages, were

reduced at this stage, it was the only growth factor for which  
mRNA

expression was increased significantly in macrophage-  
enriched cultures.

TGF-beta1, which supports oligodendrocyte differentiation,  
was increased

in the supernatant of macrophage-enriched cultures only after  
the onset of

myelinogenesis. Hence, standard cultures treated with TGF-  
beta1 during

the premyelinating period reproduced effects of macrophage  
supplementation, inducing an increase in MBP synthesis and  
in PDGF-AA and

FGF-2 bioavailability. A similar increase in MBP  
synthesis in PDGF-AA treated cultures emphasises its central  
role in

oligodendrocyte progenitor proliferation. In contrast, FGF-  
2 blocked MBP synthesis in the cultures. In cultures treated  
with

anti-TGF-beta1 antibody before or after the first detection of  
MBP,

supernatant levels of TGF-beta1, FGF-2, and PDGF-AA  
were reduced with resultant inhibition of myelination.

Paradoxically,

supraphysiological TGF-beta1 treatment after the onset of  
myelination had the same effect on myelin accumulation.

These

results indicate an enabling and regulatory role for TGF-beta1  
in

oligodendrocyte development and, as a source of TGF-beta1,  
macrophages in

the inflammatory multiple sclerosis lesion, may have  
the potential to promote remyelination by modulating the  
growth factor

repertoire in demyelinating disease.

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FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 11:32:22  
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L2 1 S L1 AND (MULTIPLE SCLEROSIS OR MS)

L3 6 S L1 AND MYELIN

L4 4 DUPLICATE REMOVE L3 (2 DUPLICATES  
REMOVED)

L5 275600 S MULTIPLE SCLEROSIS OR MS

L6 9549 S L5 AND MYELIN

L7 1488 S L6 AND TREATMENT

L8 4 S L7 AND FGF-2

L9 2 DUPLICATE REMOVE L8 (2 DUPLICATES  
REMOVED)

=> s l5 and oligodendrocyte

L10 0 L5 AND OLIGODENDROCYTE

=> s l5 and oligodendrocyte

L11 2047 L5 AND OLIGODENDROCYTE

=> s l11 and treatment

L12 292 L11 AND TREATMENT

=> s l12 and fgf?

L13 11 L12 AND FGF?

=> duplicate remove l13

DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L13

L14 5 DUPLICATE REMOVE L13 (6 DUPLICATES  
REMOVED)

=> d 1-5

L14 ANSWER 1 OF 5 MEDLINE on STN  
DUPLICATE 1

AN 2004068146 IN-PROCESS

DN PubMed ID: 14769383

TI Inducible expression of FGF2 by a rat oligodendrocyte  
precursor cell line promotes CNS myelination in vitro.

AU Magy Laurent; Mertens Caroline; Avellana-Adalid Virginia;  
Keita Mahamane;

Lachapelle Francois; Nait-Oumesmar Brahim; Fontaine  
Bertrand; Baron-Van  
Evercooren Anne

CS INSERM U546, Laboratoire des Affections de la Myeline et  
des Canaux

Ioniques Musculaires, Faculte de Medecine Pitie-Salpetriere,  
IFR 70, CHU

Pitie-Salpetriere, 75634 Paris Cedex 13, France.

SO Experimental neurology, (2003 Dec) 184 (2) 912-22.

Journal code: 0370712. ISSN: 0014-4886.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS IN-PROCESS; NONINDEXED; Priority Journals

ED Entered STN: 20040211

Last Updated on STN: 20040225

L14 ANSWER 2 OF 5 MEDLINE on STN  
DUPLICATE 2

AN 2003569220 MEDLINE

DN PubMed ID: 14648590

TI Role for TGF-beta1, FGF-2 and PDGF-AA in a myelination of  
CNS

aggregate cultures enriched with macrophages.

AU Diemel Lara T; Jackson Samuel J; Cuzner M Louise

CS Department of Neuroinflammation, Institute of Neurology,  
University

College London, London, United Kingdom..

l.diemel@ion.ucl.ac.uk

SO Journal of neuroscience research, (2003 Dec 15) 74 (6) 858-  
67.

Journal code: 7600111. ISSN: 0360-4012.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200401

ED Entered STN: 20031216

Last Updated on STN: 20040131

Entered Medline: 20040130

L14 ANSWER 3 OF 5 MEDLINE on STN  
DUPLICATE 3

AN 2001464274 MEDLINE

DN PubMed ID: 11509953

TI Fibroblast growth factor-II gene therapy reverts the clinical  
course and

the pathological signs of chronic experimental autoimmune  
encephalomyelitis in C57BL/6 mice.

AU Ruffini F; Furlan R; Poliani P L; Brambilla E; Marconi P C;  
Bergami A;

Desina G; Glorioso J C; Comi G; Martino G

CS Neuroimmunology Unit, Department of Neuroscience, DIBIT-  
San Raffaele

Scientific Institute, Milano, Italy.

SO Gene therapy, (2001 Aug) 8 (16) 1207-13.

Journal code: 9421525. ISSN: 0969-7128.

CY England: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200109

ED Entered STN: 20010820

Last Updated on STN: 20010910

Entered Medline: 20010906

L14 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL  
ABSTRACTS INC. on STN

AN 2001:366396 BIOSIS

DN PREV200100366396

TI FGF2 and myelination in an embryonic rat brain coculture  
system  
in vitro.

AU Keita, Mahamane [Reprint author]; Magy, Laurent [Reprint  
author]; Richard,

Laurence [Reprint author]; Couratier, Philippe [Reprint author];  
Vallat,

Jean-Michel [Reprint author]

CS Limoges, France

SO Neurology, (April 24, 2001) Vol. 56, No. 8 Supplement 3, pp.  
A94-A95.

print.

Meeting Info.: 53rd Annual Meeting of the American Academy  
of Neurology.

Philadelphia, PA, USA. May 05-11, 2001. American Academy  
of Neurology.

CODEN: NEURAI. ISSN: 0028-3878.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)

LA English

ED Entered STN: 2 Aug 2001

Last Updated on STN: 19 Feb 2002

L14 ANSWER 5 OF 5 MEDLINE on STN  
DUPLICATE 4

AN 97434941 MEDLINE

DN PubMed ID: 9291164

TI Growth factors and myelin regeneration in multiple  
sclerosis.

AU Webster H D

CS Laboratory of Experimental Neuropathology, NINDS,  
National Institutes of

Health, Bethesda, Maryland 20892, USA.

SO Multiple sclerosis (Houndmills, Basingstoke, England), (1997  
Apr) 3 (2)

113-20. Ref: 128

Journal code: 9509185. ISSN: 1352-4585.

CY ENGLAND: United Kingdom

DT Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, ACADEMIC)

LA English

FS Priority Journals

EM 199710

ED Entered STN: 19971021

Last Updated on STN: 20000303

Entered Medline: 19971007

=> d 4-5 abs

L14 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL  
ABSTRACTS INC. on STN

L14 ANSWER 5 OF 5 MEDLINE on STN  
DUPLICATE 4

AB Insulin-like growth factor-I (IGF-I), platelet-derived growth factor (PDGF), fibroblast growth factor (FGF) and ciliary neurotrophic factor (CNTF) are multifunctional growth factors which are found in the CNS. Oligodendroglia are the cells that form and maintain myelin sheaths and many in vitro experiments have shown that these growth factors promote the proliferation, differentiation and survival of cells in the oligodendroglial lineage. Since myelin breakdown is often severe in multiple sclerosis (MS), the possibility of growth factor use in the treatment of MS has been considered and recently, IGF-I treatment has been shown to reduce lesion severity and promote myelin regeneration in experimental autoimmune encephalomyelitis (EAE), an animal model of MS. This review briefly summarizes the structural characteristics of these growth factors and the actions which might help reduce oligodendrocyte-myelin sheath injury in MS and promote myelin regeneration.

=> d his

(FILE 'HOME' ENTERED AT 11:31:56 ON 04 MAR 2004)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 11:32:22 ON 04 MAR 2004

L1 299 S FGF-9 OR FIBROBLAST GROWTH FACTOR 9  
 L2 1 S L1 AND (MULTIPLE SCLEROSIS OR MS)  
 L3 6 S L1 AND MYELIN  
 L4 4 DUPLICATE REMOVE L3 (2 DUPLICATES REMOVED)  
 L5 275600 S MULTIPLE SCLEROSIS OR MS  
 L6 9549 S L5 AND MYELIN  
 L7 1488 S L6 AND TREATMENT  
 L8 4 S L7 AND FGF-2  
 L9 2 DUPLICATE REMOVE L8 (2 DUPLICATES REMOVED)  
 L10 0 S L5 AND OLIGODENDROCYTE  
 L11 2047 S L5 AND OLIGODENDROCYTE  
 L12 292 S L11 AND TREATMENT  
 L13 11 S L12 AND FGF?  
 L14 5 DUPLICATE REMOVE L13 (6 DUPLICATES REMOVED)

=> s l1 and oligodendrocyte

L15 5 L1 AND OLIGODENDROCYTE

=> duplicate remove l15

DUPLICATE PREFERENCE IS 'MEDLINE, BIOSIS'  
 KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n

PROCESSING COMPLETED FOR L15

L16 5 DUPLICATE REMOVE L15 (0 DUPLICATES REMOVED)

=> d 1-5

L16 ANSWER 1 OF 5 MEDLINE on STN

AN 2003302062 MEDLINE

DN PubMed ID: 12828933

TI Astrocytes produce CNTF during the remyelination phase of viral-induced spinal cord demyelination to stimulate FGF-2 production.

AU Albrecht Phillip J; Murtie Joshua C; Ness Jennifer K; Redwine Jeffrey M;

Enterline Jonathan R; Armstrong Regina C; Levison Steven W  
 CS Department of Neuroscience & Anatomy, Pennsylvania State University

College of Medicine, Hershey, PA 17033, USA.

NC NS 33316 (NINDS)

SO Neurobiology of disease, (2003 Jul) 13 (2) 89-101.

Journal code: 9500169. ISSN: 0969-9961.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200308

ED Entered STN: 20030628

Last Updated on STN: 20030809

Entered Medline: 20030808

L16 ANSWER 2 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL

ABSTRACTS INC. on STN

AN 2000:413512 BIOSIS

DN PREV200000413512

TI Fibroblast growth factor-9

modulates the expression of myelin related proteins and multiple

fibroblast growth factor receptors in developing oligodendrocytes.

AU Cohen, Rick I. [Reprint author]; Chandross, Karen J.

CS National Institutes of Health, National Institute of Neurological

Disorders and Stroke, 9000 Rockville Pike, Building 36, Room 5D05,

Bethesda, MD, 20892-4160, USA

SO Journal of Neuroscience Research, (August 1, 2000) Vol. 61, No. 3, pp.

273-287. print.

CODEN: JNREDK. ISSN: 0360-4012.

DT Article

LA English

ED Entered STN: 27 Sep 2000

Last Updated on STN: 8 Jan 2002

L16 ANSWER 3 OF 5 MEDLINE on STN

AN 1999429830 MEDLINE

DN PubMed ID: 10498823

TI Glial expression of fibroblast growth factor -9 in rat central nervous system.

AU Nakamura S; Todo T; Motoi Y; Haga S; Aizawa T; Ueki A; Ikeda K

CS Department of Ultrastructure and Histochemistry, Tokyo Institute of

Psychiatry, Kamikitazawa, Setagaya, Tokyo, Japan.. snakamu@pop16.odn.ne.jp

SO Glia, (1999 Oct) 28 (1) 53-65.

Journal code: 8806785. ISSN: 0894-1491.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199911

ED Entered STN: 20000111

Last Updated on STN: 20000111

Entered Medline: 19991122

L16 ANSWER 4 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL

ABSTRACTS INC. on STN

AN 1999:74329 BIOSIS

DN PREV199900074329

TI Expression cloning of FGF-9 as a potent myelination factor for mature rat oligodendrocytes.

AU Treanor, J. J. S. [Reprint author]; Zhang, M. [Reprint author]; Wang, J.

[Reprint author]; Zhang, T. J. [Reprint author]; Armstrong, R. C.; Louis,

J.-C. [Reprint author]; Magal, E. [Reprint author]

CS Dep. Neurosci., Amgen Inc., Thousand Oaks, CA 91320, USA

SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1798.

print.

Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part

2. Los Angeles, California, USA. November 7-12, 1998.

Society for

Neuroscience.

ISSN: 0190-5295.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)

LA English

ED Entered STN: 1 Mar 1999

Last Updated on STN: 1 Mar 1999

L16 ANSWER 5 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

AN 1997:382383 BIOSIS

DN PREV199799681586

TI FGF-9 and FGF-2 regulate the expression of fibroblast growth factor receptors and myelin proteins during oligodendrocyte development.

AU Cohen, Rick I.; Chandross, Karen J.; Hudson, Lynn D.

CS NIH, NINDS, LDN, 9000 Rockville Pike Build. 36, Room 5D-05, Bethesda, MD 20892, USA

SO Journal of Neurochemistry, (1997) Vol. 69, No. SUPPL., pp. S89.

Meeting Info.: Joint Sixteenth Biennial Meeting of the International

Society for Neurochemistry and Twenty-eighth Annual Meeting of the

American Society for Neurochemistry. Boston, Massachusetts, USA. July

20-26, 1997.

CODEN: JONRA9. ISSN: 0022-3042.

DT Conference; (Meeting)

Conference; Abstract; (Meeting Abstract)

LA English

ED Entered STN: 4 Sep 1997

Last Updated on STN: 27 Oct 1997

=> d 2-5 abs

L16 ANSWER 2 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

AB The effect of fibroblast growth factor (FGF)-9 on the expression of FGF receptors (FGFR) and the major myelin proteins was examined in cultures of developing rat brain oligodendrocytes (OLs), using immunological techniques. FGFR-1, -3, and -4 were expressed at all developmental stages but were not present in isolated myelin fractions.

By contrast, FGFR-2 protein was predominantly localized to differentiating cells and myelin. FGF-9 altered FGFR and myelin protein levels during OL differentiation; there was increased expression

of FGFR-1 and decreased levels of both FGFR-2 and myelin proteins.

Further, FGF-9 stimulated mitogen-associated protein kinase (MAPK) phosphorylation. The effect of FGF-9 on MAPK, however, was transient and less robust in progenitor cells than in

differentiated oligodendrocytes. The effects of FGF-9 and FGF-2 on FGFR and myelin protein levels were comparable; both

up-regulated FGFR-1, and down-regulated FGFR-2, CNP, PLP and MBP. These

findings suggest that FGF-9 may be important for glial cell development.

L16 ANSWER 3 OF 5 MEDLINE on STN

AB We examined the expression of fibroblast growth factor (FGF)-

9 in the rat central nervous system (CNS) by immunohistochemistry

and in situ hybridization studies. FGF-9

immunoreactivity was conspicuous in motor neurons of the spinal cord,

Purkinje cells, and neurons in the hippocampus and cerebral cortex. In

addition to the neuronal localization of FGF-9 immunoreactivity that we reported previously, the present double-label

immunohistochemistry clearly demonstrated that the immunoreactivity was present in glial fibrillary acidic protein (GFAP)-positive astrocytes

preferentially present in the white matter of spinal cord and brainstem of

adult rats and in CNPase-positive oligodendrocytes that were arranged

between the fasciculi of nerve fibers in cerebellar white matter and

corpus callosum of both adult and young rats. There was a tendency for

FGF-9 immunoreactivity in oligodendrocytes to be more pronounced in young rats than in adult rats. The variation of oligodendrocyte FGF-9 immunoreactivity in adult rats was also more pronounced than that in young rats.

With in situ

hybridization, FGF-9 mRNA was observed in astrocytes in the white matter of rat spinal cord and oligodendrocytes in the white

matter of cerebellum and corpus callosum of adult and young rats. The

expression of FGF-9 mRNA in glial cells was lower than in neurons, and not all glial cells expressed FGF-9.

In the present study, we demonstrated that FGF-9 was expressed not only in neurons but also in glial cells in the CNS.

FGF-9 was considered to have important functions in adult and developing CNS.

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